

# Why it Was a Shark, Not a Whale, That Swallowed Jonah

*Dr. David Starr Jordan Discovers Fossil Giant Sharks That Could Easily Have Swallowed the Bible Prophet Entire*



Showing the Enormous Size of a Fossil Shark's Tooth—Six Inches High. Photograph by the American Museum of Natural History, New York.

THE discovery of a fossil bed of gigantic American sharks by Dr. David Starr Jordan furnishes new evidence that it was probably a shark and not a whale that swallowed the prophet Jonah in the Bible.

It is now proved that there have been sharks capable of swallowing one or many men entire, that they have the habit of devouring large animals, and that sharks of the large carnivorous varieties have been common in the Mediterranean where the Jonah episode occurred. Against the whale theory it is shown that few species of whales have throats large enough to swallow a man entire, that these species have not frequented the Mediterranean and that even where they live they have not the habit of snapping voraciously at large objects as the sharks have.

One of the newly discovered fossil American sharks is reported to have been 120 feet long. This must have been the most terrible and ferocious animal of which we have any record, provided that the preliminary report is correct. Every shark has enormous jaws and throat in proportion to its size, and it follows that this monster prehistoric shark must have had an enormous swallowing capacity.

To such a creature the swallowing of a man would be a mere trifle. Indeed, a shark a half or a quarter the size of this one could swallow a man as easily as a man takes a pill.

The recently discovered shark remains were found in the quarries of the Torrance Lime and Fertilizer Company, in the foothills of Palos Verdes, near Los Angeles, Cal. The rocks revealed vast quantities of varied fossil remains.

Dr. David Starr Jordan, the noted naturalist and former president of Stanford University, and Professor Chester Stark, a well-known zoologist, have visited the quarries and declared that the remains were of extraordinary scientific importance. Dr. Jordan will make a report on them to the Geological Research Department of Yale University.

The formation consisted of limestone beds, which were particularly rich in sharks' teeth. The scientists found one tooth 4½ inches long and about three inches wide, which was perfectly preserved. One of the teeth is stated to have indicated the existence of an extinct shark 120 feet long. All extinct sharks are reconstructed from their teeth, because the bones being soft dissolve soon after death.

Many different species of extinct sharks were found. They were shown by their teeth to be of the carnivorous species, such as would be termed "man-eaters" to-day. Their number and eating power indicated the existence of an ocean seething with life to an extent that is unknown at present.

"There are four species of sharks here at least," said Dr. Jordan, "that have never been found before."

The existence of a carnivorous shark 120 feet long surpasses in size and power all the creatures living or dead of which we have any reliable record and makes all stories of unknown monsters of the deep seem possible.

Hitherto the biggest fossil shark on record has been the one whose jaw is mounted in the American Museum of Natural History in New York. It has become famous all over the world. The scientist in charge of the department of fishes at the Museum admitted that it was



Early Christian Drawing Showing Jonah Being Thrown to an Unknown Monster. This Proves They Were Then Uncertain What the Animal Was.

most probably a shark that swallowed Jonah.

The Museum shark lived in prehistoric times along the coast of South Carolina. It was 80 feet in length and weighed 100 tons. Its jaws measured 9 feet across and approximately 11 feet from jaw to jaw when opened up.

The teeth average 6 inches in height in the middle of the jaw and gradually decrease in size in the direction of the sides of the mouth, the smallest teeth measuring 2 inches in height.

This titanic shark was called "carcharodon megalodon," meaning "flesh-tooth, big tooth."

In restoring the jaw of the prehistoric shark the teeth were arranged as in the living species of carcharodon, the great white shark or man-eater of the tropics, which sometimes attains a length of 50 feet.

Dr. Bashford Dean, of the American Museum, who restored the fossil shark, says there can be no question that the fossil shark differed in no essential from its modern relative.

The terrible teeth are 256 in number and arranged in four rows. Imagine the biting and tearing power of such a collection of jagged teeth.

The jaws of a particularly large specimen of an existing man-eater were borrowed from the Paris Museum of Nat-

ural History and the extinct shark was built up according to scale from the living form. The restoration of the extinct monster was based on the teeth alone.

The fossil teeth were arranged in the restored jaws in the same number of rows of graded sizes as in the living form. Fortunately a large assortment of teeth of the fossil shark was available, out of which a complete dentition was selected.

A regular formula has been devised by Dr. Bashford Dean by which the size of carnivorous sharks can be calculated. A living specimen 20 feet long had teeth 1½ inches in height, and a specimen 40 feet long had teeth 3 inches high. Therefore, the fossil shark with a tooth 6 inches high would have been approximately 80 feet long. The newly discovered specimen 120 feet long would presumably be measured according to the same rule.

Judging from the number of teeth found, the monster sharks were very common in their day. This proves the existence of a marvelous swarm of life in the ocean in former times. The sharks are proverbially greedy and rapacious. The 80-foot shark had a stomach capacity of three tons and it is believed that he consumed at least three tons of food daily, probably more.

If the extinct California shark meas-

ured 120 feet in length, then his jaws were 13½ feet across, 16½ feet from jaw to jaw, and his mouth was 22½ feet deep.

His stomach would have had an extreme length of about 33 feet and a diameter of 22 feet.

He would have weighed 246 tons if built in the same proportions as an existing great white shark. He would have required about 4½ tons of flesh food daily.

An expert of the American Museum pointed out that the shark's mouth, throat and stomach formed a continuous sac without marked divisions as in higher animals. All these parts can be expanded to an indefinite extent. It is therefore possible to imagine a shark swallowing almost anything within the limits of its length.

Sharks when hungry are exceedingly voracious and will swallow literally anything. A ship's captain reports that off Port Darwin, Northern Australia, he saw a great white shark swallow two dead horses and a barrel of spoiled salt pork, wood and all. Such a creature might swallow a man entire without biting into him.

And now as to the old Bible story commonly known as "Jonah and the Whale." The new scientific discoveries offer very convincing evidence that the great fish that swallowed the Hebrew prophet was in fact a shark.

It may be recalled that in the Bible story the Lord ordered the prophet Jonah

The Fossil Shark's Gigantic Jaw Exhibited in the American Museum of Natural History, New York. It Is Nine Feet Across and Eleven Feet from Top to Bottom. The Museum Scientist, a Big Man, Is a Small Object Inside These Vast Jaws.

The Sailors Casting Jonah Into the Mediterranean Because They Believed He Was Causing Them Misfortune. The Bible Says He Was Swallowed by a "Great Fish."

idea that it was a whale, because that seemed to them the only sea animal large enough to swallow a man entire and keep him in its stomach three days and three nights. Against this assumption is the well-known fact that most whales have very small throats, made for swallowing tiny sea animals, and do not eat large creatures like men.

It is said that the sperm whale could swallow a man entire, but it lives in the South Atlantic, far from the Mediterranean. Moreover, it is not a fierce and rapacious animal like the shark, which will on occasion swallow anything it sees.

The new scientific discoveries, however, make it not only possible but extremely probable that it was a shark that swallowed Jonah. Science

confirms the essential truthfulness of the Bible narrative as it has done in so many other cases.

There are still to-day on the African side of the Mediterranean many sharks of the order to which the California shark belonged. These sharks are fierce man-eaters and are closely related to the great white shark of Northern Australian waters which reaches a length of 50 or 60 feet.

When we turn to the statement that the great fish vomited Jonah after he had been in its inside three days and nights we find something harder to believe, but even here there are facts which corroborate the story to some extent.

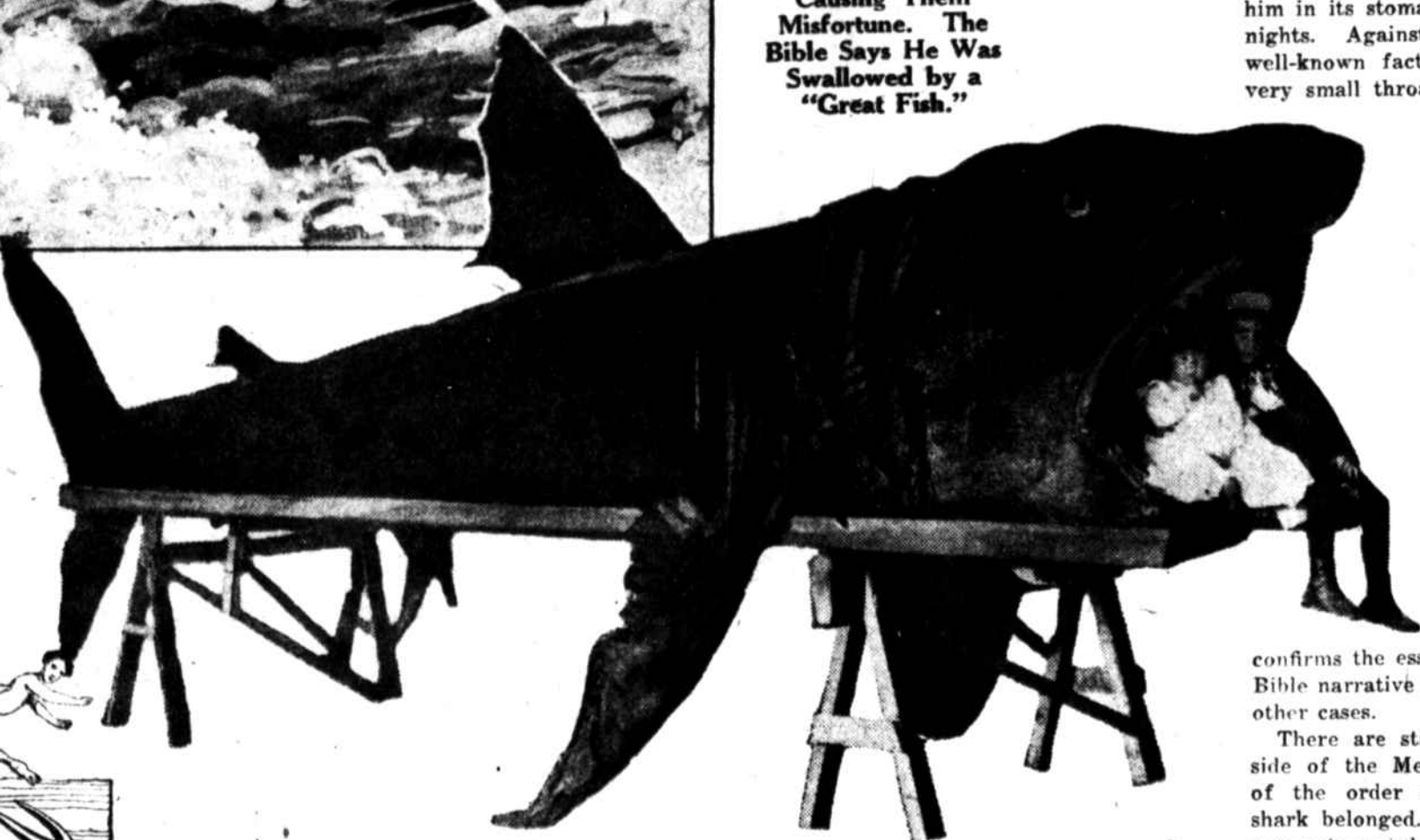
There is a record of a British naval officer that in 1758 a man fell overboard in the Mediterranean and was swallowed by a shark. The officer says he trained a gun on the shark and hit it, and that it vomited the man up. A boat was launched and the sailor was picked up, none the worse for his experience.

It may be contended that this evidence goes a long way back and is hard to verify. There is a better attested record in the United States Navy which though not so amazing tends in the same general direction. The log books of the U. S. S. Falmouth and the U. S. S. Saratoga both refer to this episode.

The Falmouth was lying off Pensacola, Fla., on July 12, 1845, when J. Griffin, a quartermaster, fell overboard in the darkness and was lost.

On July 19, the men of the Saratoga were fishing for sharks out in the Gulf of Mexico, about 50 miles from where Griffin was lost. They hauled up a 12-foot shark and cut him open on the deck. When they opened the belly, they were amazed to find the head of James Griffin, still recognizable, inside it.

The occurrence was duly investigated by a coroner's jury and Griffin's identity established.



A Big Shark Recently Caught on the California Coast, With Two Children Seated in Its Mouth.

proceed to Nineveh to preach against the great wickedness of the people there. Jonah, fearing to go to Nineveh, took ship for Tarshish, which was an ancient name for Spain, and lay at the farther end of the Mediterranean.

A great storm arose, and the ship was in danger of sinking. The sailors, believing that somebody was causing them trouble, cast lots to find out who it was, and the "lot fell upon Jonah." They then cast him into the sea. But the Lord prepared a great fish which swallowed Jonah and kept him in its belly "three days and three nights." After which it vomited the prophet forth upon dry land.

The text of the Old Testament says simply that it was "a great fish" that swallowed Jonah. The common impression that it was a whale is based mainly on a verse in the King James' version of St. Matthew xii, 40, where Jesus says: "For as Jonah was three days and three nights in the whale's belly, so shall the Son of Man be three days, and three nights in the heart of the earth."

The Greek text of the New Testament however merely says a "sea monster" and not a "whale."

The early Christians were in doubt as to the nature of the monster and represented it as a dragon of fantastic shape.

Many critics have asserted that the story was fanciful and impossible and that it probably symbolized the miraculous manner in which Jonah was finally transported to Nineveh.

People long clung tenaciously to the